

Assessment of Organisational Knowledge Management and Innovativeness in Medium-Scale Manufacturing Firms: A Case for Sustainability

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Abstract

While the drive towards profit is a distinctive and the most dominating objective of every business, environmental issues are currently putting growing pressure on organisational models. This paper examined the implication of knowledge management- acquisition, distribution, and utilization- on innovativeness in selected manufacturing firms in north-central Nigeria. Data was gathered through the use of structured questionnaire. Multiple regression technique was employed to test the research hypothesis. The study established knowledge management to have significant effect on organizational innovativeness and recommended that the management of entrepreneurial firms should look at adopting team-focused approaches especially for task implementation to facilitate idea sharing and performance.

Keywords: Knowledge Management, Innovation, Sustainability.

Introduction

Business enterprises operate in a volatile environment characterized by fear and uncertainty, high rate of inflation, intense competition with foreign firms, and policy instability (Ogundele 2004; Ayoade, 2005), and by implication, incur high cost to meliorate the effect of the disadvantageous environment, and this huge cost affect the performances of these enterprises. Customers are continuously demanding high- quality products/services at low prices while shareholders also demand increasing returns on their investments from the enterprises. These increasing demands from opposing sides of business continue to increase the pressure on medium scale enterprises. In order to achieve this objective, a firm has to produce valuable goods or services which sell innovatively, and must at the same time be able to keep cost down.

Despite the potential performance rewards of building a resilient business processes, most entrepreneurial firms struggle to prioritize process and to allocate resources to it. They often commit resources instead towards products to yield immediate financial rewards which can be put to more immediate use to meet shareholders' increasing demand on profit which might not be attainable or sustainable in the presence of customers' increasing demand for quality and the adverse environmental factors. While focus on profit may

appear to be the more logical option since the major objective of every business firm is obtain immediate rent, it will however be imperative to consider in such instances the implication of a possible immediate obsolescence of a firm's product offerings.

Problem Statement

A number of enterprises in Nigeria have either discontinued operation, been acquired by stronger companies, or relocated their operation base to neighbor countries (Abdul & Isiaka, 2015). Medium scale firms in Nigeria have over the years made reactive moves to adopt measures to keep them afloat. Some medium scale firms that still operate within the Nigerian market have attempted to resort to using cost-cutting, an important success-factor as a strategy for increased earnings (Oyedokun et. al, 2019; Olabisi, Sokefun, & Oginni, 2012). Organisations cannot compete by simply cutting costs; they must compete on the foundation of knowledge and the value added (Bahiti, 2008). The primary question then is: how do firms create immediate performance while simultaneously building a resilient system to sustain this performance?

Objective

This study set out to ascertain the extent to which knowledge management influences organization innovation in medium scale enterprises by examining the interactions between organizational innovativeness and knowledge manahement indicators-knowledge aquisition, distribution, and utilization.

Hypothesis

H₀: Organisational knowledge management has no significant influence on innovativeness of the studied enterprises.

Conceptual/Theoretical Review

Knowledge Management

Management of knowledge is an activity that develops, stores and transfers knowledge, aiming to provide the necessary information so that the organization members take the right decisions (Gonzalez & Martins, 2014). It is increasingly being considered as an essential element for successful and effective organisations (Kim & Tcha, 2012). The management of organizational knowledge depends on individual factors, such as, beliefs, experience, motivation, expectations, perceptions, attitudes, values, and mind-setting towards Knowledge sharing (Volady, 2013). Knowledge has been said to be the primary source of competitive advantage and critical to the long-term sustainability and success of the organization. Thus, knowledge is one of the most important resources for an organization (Choe, 2004). Knowledge has been established to be a key source of growth in the global economy, noting that in future, organizations will have to be information-intensive (Martynova, 2014). Bartol and Abhishek (2002) define knowledge as ideas, facts, expertise,

and judgments that can influence individual, team, and organizational performance and information as the source of this knowledge.

The organization's knowledge base enables it to explain, anticipate, and predict events and interaction patterns in the organization and in its environment. Knowledge is a critical organizational resource and knowledge sharing can raise the sustainable competitiveness of an organization (Foss & Pedersen 2002). The culture of knowledge is focused on cooperation and knowledge exchange between individuals (Irani, Sharif, & Love, 2009). The organization develops new knowledge through the knowledge transformation cycle. Knowledge sharing activities can be categorized as- intra-firms, and inter-firms (Lee, Jun, & Lee, 2016). The Intra-firm activity is performed within the same organization through formal and informal meetings, dialogues, and social networks. This allows the knowledge of the organization to be updated for future use (Vij & Faroop, 2014). Inter-firm activity is performed in different organizations, allowing firms to create value, share research and development, attain leadership, and access new efficient markets (Lee, Jun & Lee, 2016). The process of managing knowledge in the organization includes knowledge acquisition, storage, distribution, and utilization. Knowledge acquisition refers to the intra-organizational process that facilitates the creation of tacit and explicit knowledge at the individual level that integrates at the organizational level. It is the identification and the absorption of information from external sources (Gold, Malhotra, & Segars, 2001). Acquisition also concerns organizational stimulus to learning of employees, which makes organisations able to integrate, build, and reconfigure its internal competences to respond to environmental changes (Teece, 2007). Knowledge storage refers to the process of organizational memory formation in which knowledge is formally stored in physical memory systems, informally retained as values, standards, and beliefs that are associated with the organizational structure and culture (Alavi & Leidner, 2001), and also retained in the organizational processes and routines (Kane & Alavi, 2007). Knowledge distribution refers to the process by which new information from different sources which eventually can drive the creation of new knowledge (Lee & Yang, 2000) is shared. Here, the focus is on organizational factors that facilitate or inhibit the transfer process, including the absorptive capacity of the organization, the development of a sharing culture, expertise developed by individuals, motivational aspects, and technology that eases the transfer process (Kane & Alavi, 2007; Amayah, 2013). Through teamwork, less experienced employees have contact with a body of knowledge hitherto dominated by more experienced employees. Teamwork is also important for knowledge management because it facilitates the integration of multi-disciplinary knowledge by facilitating knowledge acquisition and utilization. Rowley (2001) avers that knowledge utilization is the ability of the individuals of an organization to locate, access, and use stored knowledge of the organization. The use can take on an exploiting character, when, through the existing knowledge base, decisions or improvements are made; or an exploratory character, when the primary organizational knowledge is used as a base for the creation of new knowledge in an innovative proposal. The management of knowledge depends on collaboration and feedback from colleagues. It covers the provision

of sufficient training, valuing contributions, giving affirmative feedback, and participation (Wahlroos, 2010).

There is increasing evidence that organisations may use knowledge management for promoting significant innovations in business (Centobelli, Cerchione, & Esposito, 2017). Knowledge management provides huge impacts to the creation of learning organizational culture, and innovation (Casimir et al. 2012). It identifies existing and accessible knowledge in order to transfer and tally this knowledge to solve specific tasks better, faster and cheaper (Christensen, 2007). It allows for knowledge to be identified, transferred, and applied to solve problems, so that the organizational tasks are done effectively and efficiently (Shaari, Rahman & Rajab, 2014). Knowledge management has been applied to employee and team creativity, individual skill development, and performance improvement (Son, Duck, & Seung-Wan, 2017; Men, Fong, Luo, Zhong & Huo, 2017).

Organization Innovativeness

Žižlavský, (2011) describes innovation as product, process or organisational changes that do not necessarily originate from new scientific discoveries, but may arise from a combination of already existing technologies and their application in a new context. Innovation can be made in products, services, production and distribution methods, organizational methods, marketing, and design methods of a firm (Yıldız, Baştürk, & Bozc, 2014). According to Crossan and Apaydin (2010), innovation can be defined as production or adoption, assimilation, and exploitation of a value-added novelty in economic and social spheres; renewal and enlargement of products, services, and markets; development of new methods of production; and establishment of new management systems. When a firm is innovative, this is reflected by the firm's tendency to depart from established practices and technologies by embracing and supporting creativity and experimentation, technological leadership, novelty and R&D in the development of products, services and processes (Grande, Madsen & Borch, 2011). Innovation is a mind-set, a way of thinking beyond the present and into the future. Innovation is important for organisations and when used well it can be a process, strategy and management technique (Padilla-Meléndez, Dieguez-Soto & Garrido-Moreno, 2015).

Upgraded technologies, changing customer tastes, and shortening product life cycles, combined with overall increased global and regional competition, force firms to innovate relentlessly (Slater, Mohr, & Sengupta, 2014). The concept of organizational innovativeness was first described by Schumpeter (1930) to mean the introduction of a new product or modifications brought to an existing product, new process, the discovery of a new market, the development of new sources of supply with raw materials, and other changes in the organization. Tidd, Bessant & Pavitt (2005) aver that an innovative process can be divided into two essential parts. One part is inventive – associated with the generation of the original idea, thought or concept – and the second is innovative, during which the invention is implemented and marketed.

The ability to innovate is a critical success factor in determining the growth and future performance of firms and seen as the only means by which organisations can sustain competitive advantage (Carayannis & Provance, 2008). Organisations around the world are faced with stiff competition resulting from rapid technological developments which is forcing them to continue to innovate to ensure survival, growth and excellence (Ahuja, 2011). The internal environment of an organisation needs to have a suitably preset innovative culture, since this type of culture is characterized by the transience of organisational structures, utilization of specialists and temporary teams, the necessity of speedy and flexible changes responding to new opportunities, which increases the innovative potential of such organisations (Molina-Morales, Martinez-Fernandez & Torlo, 2011).

The link between innovation and performance sustainability are more recognized as the major concerns of business in the 21st century. Zhou and Wu (2010) buttress the criticality of innovation for firms to adapt to turbulent environments and achieve a sustainable competitive advantage. Whilst firms need a continuous innovation process to respond to the ever fast environmental changes, the goal of sustainability requires new ways of doing business (Cabral, 2010). An innovative enterprise is one that is characterized by flexibility, openness to change, search for information and resources in the external environment, anticipation, creativity, experimenting, and informal communication. These characteristics build the firm's ability to be innovative and show a fundamental willingness to move forward from existing technologies or practices and venture beyond the current state of the art. The ability to be innovative is referred to as innovativeness. Innovativeness depicts realizing innovation before others. This is in tandem with the view of Robert (2003) who described innovativeness as the degree to which an organisation is earlier in the adoption of a value relative to competitors. Innovativeness describes the process that leads to innovation (Pesämaa, Shoham, Wincent, & Ruvi, 2013), and how well a firm is engaged with innovation, and its ability to produce something new or make changes in products, services, processes and ideas; is the process that leads to innovation. Innovativeness is not only the creation and capture of new value but also the implementation of new methods in business practices and external relations, and the improvement and transformation of managerial mind-sets to cope with changes (Akgün & Keskin, 2014). Innovation contributes to achieving performance in several regards including strong relationship between performance and new products, new products helping to maintain market shares and improve profitability, growth by means of non-price factors (design, quality, and individualization), ability to substitute outdated products (short product lifecycles), and innovation of processes that lead to production time shortening and speed up new product development in comparison to competitors (Tidd et al., 2005).

The human factor is an indispensable element in the process of innovation as Pitra (2006) avers that innovation is the result of employees' creativity in an organisation and must be always targeted at customers and bring added value. Organisations' success depends on employees' knowledge, experience, creative activity and qualification; and emphasis is

placed on continuous learning, and research and development (Hana, 2013). The Innovative capability of an organisation according to Martín-de Castro, Delgado-Verde, Navas-López & Cruz-González (2013) depends closely on its intellectual and/or organisational knowledge assets and on its ability to employ these assets.

Empirical Review

Ahiauza and Jaja (2015) examined the association between process innovation and organizational resilience in Public Universities in South-South, Nigeria. Using a survey study design in generating data from the target Public Universities situated in south-south Nigeria, the associations were analyzed in three stages; the demographic analysis in which charts and frequency distributions were used to illustrate the sample characteristics of the study, the univariate in which mean scores and standard deviations were used in descriptively assessing the nature of each variable and the bivariate in which the spearman's rank order correlation statistical tool was used in the test for all hypothesized associations. The results showed a significant association between process innovation and the measures of organizational resilience which are situation awareness, keystone vulnerability and adaptive capacity.

Mardani, Nikoosokhan, Moradi, & Doustar (2018) examined the quantitative relationship between knowledge management, innovation, and performance. The study developed a research model showing a positive relationship between knowledge management and performance, as well as its impact on innovation, which in turn contributes to the firm's performance. Using data from 120 firms that are members of the Iranian Power Syndicate, this model was tested empirically. Based on the Structural Equation Model (SEM) results by Partial Least Square (PLS) method, research hypotheses were supported. Results showed that knowledge management activities impact innovation and organizational performance directly, and indirectly through an increase in innovation capability. It was found that knowledge creation, knowledge integration, and knowledge application facilitate innovation and performance. Knowledge creation was found to have more significant effect on innovation speed, innovation quality, and innovation quantity, whereas innovation quality, knowledge creation, and knowledge integration had more significant effect on performance.

Kör & Maden (2013) examined the relationship between effective knowledge management processes and innovation types in organizations as well as shed light on the mediating effect of innovativeness on the link between knowledge management process and innovation types. Survey data were collected from 103 participants in Turkey. The results of the study show that knowledge management processes relate positively to innovativeness, which in turn increases innovations in organizations.

A critical review of extant literature revealed most of the studies on knowledge management and innovation to be atomistic, focusing on a single construct stand points perceived to be relatable to the variables. Furthermore, the review showed that up until

now, there has been little study linking knowledge management to innovation with specific reference to business resilience of entrepreneurial firms in Nigeria

Research Methods

This study adopted descriptive survey research design. This is suitable as it is a type of enquiry that deals with the collection and analysis of data for the purpose of discovering ideas and insight from an existing situation without subjecting it to any form of manipulation or control.

Population of the Study

The study population of 243 comprised the medium scale enterprises in North-Central Nigeria. According to SMEDAN and National Bureau of statistics collaborative survey (2013), the population of medium scale manufacturing firms is 243 across the six (6) states of the north-central zone of Nigeria, and the federal capital territory. The population distribution is: Nasarawa-18, Niger-47, FCT- 75, Kogi- 16, Kwara-18, Benue- 28, Plateau- 41. Complete enumeration was adopted in this study. This is because the entire population of the study was taken into consideration in data collection and analysis.

Source and Method of Data Collection

The data used for this study were obtained from primary source through the use of structured research questionnaire, copies of which were distributed to directors (or representatives) of the enterprises under study. The instrument consisting of series of questions for the purpose of gathering information from participants was designed to elicit required information by allowing participants to supply answers that may be confidential to them. The instrument placed the participants on objective response for each statement on a five-point Likert with response scoring weights of 5 for Strongly Agree (SA), 4 for Agree(A), 3 for Neutral (N), 2 for Disagree (D), and 1 for Strongly Disagree (SD).

Reliability of the Instrument

This study adopted Cronbach's Alpha coefficient for reliability test of the instrument. Cronbach's coefficient, alpha (α) method of internal consistency/homogeneity was used to measure the consistency within the items on the instrument showing how well they measured characteristics and behaviour within the test:

$$\alpha = \frac{K-1}{K} \left[\frac{1 - \sum \delta^2_k}{\delta^2} \right]$$

Where $\sum \delta^2_k$ = Sum of variances of the k questions in the instrument

K = Number of questions in the research instrument

α = Alpha Coefficient

δ^2 = Variance of the total test

Scale Reliability of Variables

Variables	Number of Items	Cronbach's Alpha
organizational Innovation	4	0.82
Knowledge Acquisition	3	0.68
Knowledge Distribution	4	0.92
Knowledge Utilization	3	0.98

Source: Researcher's Computation (2022)

Method of Data Analysis

The study employed the use of multiple regression analysis to test the stated hypothesis. The choice of multiple regression analysis was made considering the nature of the study model. The model presents one dependent variable against multiple numbers of independent variable factors. The tool was also considered suitable as it does not measure the extent of effect in isolation from the determination of the correlation and fitness of model variables.

Estimation of Study Variables

Variables of the objective are organizational innovativeness(Y) as the dependent variable and knowledge management (X) as the independent variable captured by knowledge acquisition(X₁), knowledge distribution(X₂), and knowledge utilization(X₃).

Model Specification

The following multiple regression model was specified, and the equations logged to allow for direct estimation and interpretation of the coefficients:

$$Y = \alpha_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \mu$$

Where:

Y= organizational Innovativeness

x₁= Knowledge Acquisition

x₂= Knowledge Distribution

x₃= Knowledge Utilization

μ = the error term

Operational Definition of Variables

Knowledge Acquisition is the process of extracting and organizing knowledge from a source, most times, an expert. Knowledge Distribution to the process by which new information from different sources which eventually can drive the creation of new knowledge is shared. Knowledge Utilization avers that knowledge utilization is the ability of the individuals of an organization to locate, access, and use stored knowledge of the organization.

Data Analysis

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Y	240	1.00	5.00	4.0250	1.14959
x1	240	1.00	5.00	3.9458	1.17913
x2	240	1.00	5.00	3.7708	1.10986
x3	240	1.00	5.00	3.9500	.97543
Valid N (listwise)	240				

Source: SPSS version 20.00

The table revealed that the result of descriptive statistics which indicated the mean and standard deviation as well as minimum and maximum value of the variables. The mean value of organizational innovativeness (y) is 4.02, the mean value of knowledge acquisition (X1) is 3.94, the mean value of knowledge distribution (X2) is 3.77, the mean value of knowledge utilization (X3) is 3.95. Standard deviation values of the variables were also indicated in the table.

Tests of Hypothesis

Decision Rule: Reject the null and accept the alternate hypothesis if p-value < 0.05; if otherwise, accept the null.

H₀₃: Knowledge management has no significant influence on innovation in the selected mediums scale enterprises.

Organization Innovation Equation

Dependent Variable: Organization Innovation

Method: Ordinary Least Square

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-.043	.075	-.564	.574
Knowledge Acquisition	.764	.045	16.956	.000
Knowledge Distribution	-.114	.060	-1.915	.057
Knowledge Utilization	.376	.050	7.506	.000

Source: Extract from SPSS Ver. 20

Adjusted R² = 0.944

Prob (F-Statistic) = 0.000

Interpretation of Result

The third model examined the extent to which knowledge management affects organizational innovation in medium scale enterprises in North-Central Nigeria. The regression analysis result with reveals that the model is fit for the study as the f-statistics is significant at 0.000. This implies that all the variables used in the model are fit and are correlated. The result indicates that knowledge acquisition, knowledge distribution, and knowledge utilization all have significant influence on the innovation. However, while

knowledge acquisition and knowledge utilization are indicated as having positive influence on the dependent variable, knowledge distribution is shown to have a negative influence on the dependent variable in medium scale firms in North- Central Nigeria. The Adjusted R-squared (R^2) value of 0.94 indicates that 94% variation in the dependent variable can be explained by variation in the independent variables and 6% can be explained by other factors not noted in the regression model but captured as the error term. The result indicates that the independent variable- knowledge management has a significant effect on the dependent variable- innovation. Therefore, we reject the null hypothesis that knowledge management has no significant effect on innovation and conclude that knowledge management has significant influence on organizational innovation in medium scale firms in North- Central Nigeria.

Discussion of Findings

Hypothesis three regressed organizational innovation on knowledge acquisition, knowledge distribution, and knowledge utilization. The result of the analysis indicates that knowledge management has significant effect on organizational innovation in medium scale enterprises in North- Central Nigeria. In the model, organizational innovation was used as dependent variable while knowledge acquisition, knowledge distribution, and knowledge utilization were used as proxy for knowledge management - the independent variable. The result showed that knowledge acquisition and knowledge utilization assume the positive sign, while knowledge distribution assumed a negative sign. Knowledge acquisition and knowledge utilization were found to be significant while knowledge distribution was found not to be significant. This depicts that knowledge management has significant effect on organizational innovation. This finding is consistent with the view of Mardani et al. (2018) which found that knowledge creation, knowledge integration, and knowledge application facilitate innovation and performance and that while knowledge creation has more significant effect on innovation speed, innovation quality, and innovation quantity; knowledge creation and knowledge integration has more significant effect on performance. It is also in line with the position of Kör & Maden (2013) whose study findings revealed that knowledge management processes relate positively to innovativeness, which in turn increases innovations in organizations.

The coefficient knowledge acquisition assumes a positive sign and is statistically significant to organizational innovation. This implies than an increase in knowledge acquisition will reflect a corresponding increase in organizational innovation, and vice versa; and that changes in knowledge acquisition are sufficient to cause impactful change in innovation. This result depicts that the organizations are open to gathering new information and knowledge, often engage their employees in training activities, and encourage the provision of guidance of employees by the more experienced or knowledgeable ones.

The coefficient of knowledge distribution has a negative sign and its P-value shows that it has significant effect on the organizational innovation. The implication of this is that

changes in knowledge distribution inversely affects changes in organizational innovation; and that this inverse effect is sufficient enough to cause a major effect on organizational innovation. This finding may be indicative of the fact that there is no consistency in set out procedures that promote sharing of acquired knowledge. This may also imply the absence of a system that allows for free- flow of information, thereby causing knowledge to get stuck up at several points.

The coefficient of knowledge utilization assumed a positive sign and its P-value show that it is significant to organizational innovation. This implies that an increase or decrease in knowledge utilization will cause a corresponding change in organizational innovation; and this change is sufficient enough to be considered as significant. This may mean that in the organisations enforce immediate application of knowledge transferred through official training programmes, and where new methods are taught, the employees are mandated to immediately adopt these in their different work roles.

Conclusion

The influence of knowledge management on innovativeness in medium scale enterprises in the north-central zone of Nigeria was the focus of this study. Three indicators of knowledge management were examined in this study- knowledge acquisition, knowledge distribution, and knowledge utilization. The study established that knowledge management has a positive and significant effect on organizational innovativeness in medium scale firms in North Central Nigeria. Other findings were that knowledge acquisition has positive and significant effect on organizational innovation; knowledge distribution has negative and significant effect on organizational innovation; and knowledge utilization has positive and significant effect on organizational innovation in medium scale firms in North Central Nigeria.

Recommendation

Knowledge sharing mechanisms should be put in place towards generating new forms of collective human capital through the combination of the capabilities of the different employees to build higher capabilities. Management of entrepreneurial firms should adopt team-approach especially for task implementation. This will facilitate the sharing of ideas and performance abilities.

References

- Abdul, A., & Isiaka, T., (2015). Relationship between cost management and profitability: A study of selected manufacturing firms. *International Journal of Management Sciences and Humanities*. 3(1), 33–45
- Ahiauza, L. & Jaja, S. (2015) Process Innovation and Organizational Resilience in Public Universities in South-South Nigeria. *International Journal of Managerial Studies and Research (IJMSR)* Volume 3, (11), 102-111.
- Ahuja, I. (2011). Managing research and development for core competence building in an organization. *Journal of technology management & innovation* 6 (1), 58-65.

- Akgün, A. & Keskin, H. (2014) Organizational Resilience Capacity and Firm Product Innovativeness and Performance. *International Journal of Production Research* 52 (23), 6918-6937.
- Alavi, M., & Leidner, D.(2001). Knowledge Management and Knowledge Management Systems: conceptual Foundations and Research Issues. *MIS Quarterly*, 25(1), 107-136.
- Amayah, T. (2013). Determinants of knowledge sharing in a public sector organization. *Journal of Knowledge Management*, 17(3), 454-471
- Bartol, K., & Abhishek S. (2002). Encouraging knowledge sharing: The role of organizational reward systems. *Journal of Leadership & Organizational Studies* 9: 64–76.
- Cabral, J.(2010). Firms' Dynamic Capabilities, Innovative Types and Sustainability: a Theoretical Framework. Xvi International Conference on Industrial Engineering and Operations Management.
- Casimir, G., Lee, K. and Loon, M. (2012) Knowledge Sharing: Influences of Trust, Commitment and Cost. *Journal of Knowledge Management*, 16, 740-753.
- Centobelli, P., Cerchione, R., & Esposito, E. (2017). Knowledge Management in Startups: Systematic Literature Review and Future research Agenda. *Sustainability Journal*, 9, 1-19.
- Choe, Jong-min. (2004). The consideration of cultural differences in the design of information systems. *Information & Management* 41: 669–84.
- Christensen, P. (2007). Knowledge Sharing: Moving Away from the Obsession with Best Practices. *Journal of Knowledge Management*, 11(1), 36–47. Casimir, G. (2012). Knowledge Sharing: Influences of Trust, Commitment and Cost. *Journal of Knowledge Management*, 16(5), 740–753.
- Crossan, M. M., & Apaydin, M. (2010). A Multi-Dimensional Framework of Organizational Innovation: A Systematic Review of the Literature. *Journal of Management Studies*, 47, 1154-1191.
- Foss, N., & Pedersen. (2002). Transferring knowledge in MNCs: the role of sources of subsidiary knowledge and organizational context. *Journal of International Management* 8: 49–67.
- Gold, A., Malhotra, A., & Segars, A. (2001). Knowledge management: an organizational capabilities perspective. *Journal of Management Information Systems*, 18(1), 184-214.
- Gonzalez, R., & Martins, M. (2014). Mapping the organizational factors that support knowledge management in the Brazilian automotive industry. *Journal of Knowledge Management*, 18(1), 152-176.
- Grandey A., Goldberg L., & Pugh S. (2011). Why and When do Stores with Satisfied Employees Have Satisfied Customers? The Roles of Responsiveness and Store Busyness. *Journal of Service Research* 14(4) 397-409.
- Hana,U.(2013). Competitive Advantage Achievement Through Innovation and Knowledge. *Journal of Competitiveness*, 5(1), 82-96
- Irani, Z., Sharif, A., & Love, P. (2009). Mapping knowledge management and organizational learning in support of organizational memory. *International Journal of Production Economics*, 122, 200-215.
- Kane, G., & Alavi, M. (2007). Information technology and organizational learning: An investigation of exploration and exploitation process. *Organization Science*, 18(5), 796-812.
- Kim, Y., & Tcha, M. (2012). Introduction to the Knowledge Sharing Program (KSP) of Korea. Tracing the Impacts of Korea's Engagements around the World, Korea Economic Institute.
- Kör, B. & Maden, C (2013). The Relationship between Knowledge Management and Innovation in Turkish Service and High-Tech Firms. *International Journal of Business and Social Science*, 4 (4).
- Lee, W., Jun, J., & Lee, T. (2016). Sharing Behavior and its Relationship with Core Competencies of a Company: A Grounded Theory Approach. *Indian Journal of Science and Technology*, 9(5), 1–9.
- Mardani, A., [Nikoosokhan](#), S., Moradi, M. & Doustar, M. (2018). The Relationship Between Knowledge Management and Innovation Performance. *The Journal of High Technology Management Research*, 29(1).

- Martín-de Castro, G. (2015). Knowledge Management and Innovation in Knowledge-Based and High-Tech Industrial Markets: The Role of Openness And Absorptive Capacity. *Industrial Marketing Management* 47, 143-146
- Martynova, S., & Tsymbal, L. (2014). Social background of the development of "public service" model in Russia. *Ecology, Environment and Conservation*, 20(14), 1875-1883.
- Men, C., Fong, P., Luo, J., Zhong, J. & Huo, W. 2017. When and how knowledge sharing benefits team creativity: The importance of cognitive team diversity. *Journal of Management & Organization*, 1–18.
- Molina-Morales, X., Martínez-Fernández, & Torlò, V. (2011). The dark side of trust: The benefits, costs and optimal levels of trust for innovation performance. *Long Range Planning* 44 (2), 118-133
- Olabisi J., Sokefun, A., & Oginni, B. (2012). Kaizen Cost Management Technique and Profitability of Small and Medium Scale Enterprises (SMEs) in Ogun State, Nigeria. *Pakistan Journal of Social Sciences* 3(5):147-154
- Oyedokun, G., Tomomewo, A., & Owolabi, S., (2019). Cost Control and Profitability of Selected Manufacturing Companies in Nigeria. *Journal of Accounting and Strategic Finance*, 2 (1), 14-33 (14) (Pdf) *Cost Control and Profitability of Selected Manufacturing Companies In Nigeria*.
- Padilla-Meléndez, A., Dieguez-Soto, J., & Garrido-Moreno, A. (2015). Empirical research on Innovation in Family Business: literature review and proposal of an integrative framework. *Review of Business Management*. 17(56), 1064-1089
- Pesämaa, O., & Shoham, A., Wincent, A., & Ruvio, A. (2013). How a learning orientation affects drivers of innovativeness and performance in service delivery. *Journal of Engineering and Technology Management* 30 (2), 169-187
- Pitra, Z (2006). *Management of Innovative Activities*. Professional Publishing, Prague.
- Robert, W. (2003). The role of knowledge: technological innovation in the energy system. *The Energy Journal* 24 (4)
- Rowley, J. (2001). Knowledge management in pursuit of learning. The learning with knowledge cycle. *Journal of Information Science*, 27(4), 227-237.]
- Schumpeter, J. A. (1934). The theory of economic development. Cambridge, MA: *Harvard University Press*
- Shaari, R., Rahman, S., & Rajab A. (2014). Self-Efficacy as a Determined Factor for Knowledge Sharing Awareness. *International Journal of Trade, Economics and Finance*, 5(1), 39–42.
- Slater, S., Mohr, J., Sengupta, S. (2014). Radical product innovation capability: Literature review, synthesis, and illustrative research propositions. *Journal of Production and Innovation Management*, 31, 552–566. Smart city, 221-235, 201
- Son, S., Duck, H., & Seung-Wan, K. 2017. The impact of close monitoring on creativity and knowledge sharing: The mediating role of leader-member exchange. *Creativity and Innovation Management* 26: 256–65.
- Teece, D. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28, 1319-1350.
- Tidd, J., Bessant, J. R. & Pavitt, K. 2005. Managing innovation : integrating technological, market and organization change, Chichester, John Wiley & Sons
- Vij, S., & Faroop, R. (2014). Knowledge Sharing Orientation and its Relationship with Business Performance: A Structural Equation Modeling Approach. *IUP Journal of Knowledge Management*, 12(3), 17–41
- Volady, L. (2013). An Investigation of Factors Influencing Knowledge Sharing among Undergraduate Teacher Education Students. Adelaide, South Australia: wordpress.com. <http://volady0002.wordpress.com/knowledgesharing-among-undegraduate-students/>

- Wahlroos, J.K., (2010). Social media as a Form of Organizational Knowledge Sharing: A Case Study of Employee Participation at Warsila. Master's Thesis, University of Helsinki, Helsinki. Retrieved: November 5, 2022, from helda.helsinki Available at <https://helda.helsinki.fi/bitstream/handle/10138/24624/Thesis.Johanna.Wahlross.pdf?sequence=1>
- Yıldız, S., Baştürk, F., Bozcı, I. (2014). The Effect of Leadership and Innovativeness on Business Performance. *Social and Behavioral Sciences*, 150, 785 – 793
- Zhou, K, & Wu, F. (2010). Technological Capability, Strategic Flexibility, and Product Innovation. *Strategic Management Journal* 31 (5), 547-561
- Zizlavsky, O., (2012). The development and implementation of marketing information system within innovation: The increasing of innovative performance. *Entrepreneurship–Creativity and Innovative Business Models*, 59